VIDEO SENTRY COLOR TILT

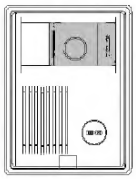
# AUDIO VIDEO ENTRY SECURITY INTERCOM

Models: **KC-1GRD,** *Main monitor station*
**KC-1HRD,** *Sub monitor station*

## INSTALLATION MANUAL

**For installation of the KC-1SD and PS-24E, please refer to the respective Installation Manual for details.**
**Check the package contents before installation.**

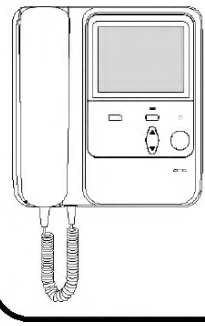
### KC-DAR



Package Contents
Screws (2)
Wood Screws (2)
Hexagonal wrench

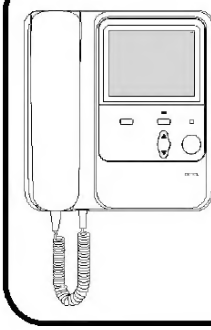
Please save Hexagonal wrench for maintenance.

### KC-1GRD



Package Contents
Installation Manual
Operation Manual
Screws (4)
Wood Screws (4)
Connector (for door release)

### KC-1HRD



Package Contents
Installation Manual
Operation Manual
Screws (4)
Wood Screws (4)

## ⚠ PRECAUTIONS ON INSTALLATION & WIRING

This manual and the markings on the product contain various symbols in order that the product will be used safely and properly, and that the installer and user are protected from injury and property damage. The following precautions must be thoroughly read and understood before proceeding.

⚠ **WARNING** *Negligence could result in death or serious injury.*
⚠ **CAUTION** *Negligence could result in injury or damage to property.*

**Explanations of Symbols;**

**GENERAL PRECAUTIONS**
The ⚠ mark indicates caution statement (incl. danger and warning), which is specifically shown inside.

**GENERAL INSTRUCTIONS**
The ❗ mark indicates contents which demand a specific action shown inside or attached.

**GENERAL PROHIBITIONS** **DISMANTLING PROHIBITIONS** **MOISTURE PROHIBITIONS**
The ⃠ mark indicates contents which prohibit a specific action shown inside or attached.

### ⚠ WARNING

1. Inside the KC-1GRD/1HRD monitor station, high voltage is present. Do not open KC-1GRD/1HRD case, as electric shock could result.
2. Do not change or alter KC-1GRD/1HRD. It can cause fire or electric shock.
3. Keep KC-1GRD/1HRD away from water or any other liquid. Fire or electric shock could result.
4. Do not put any metal through openings of KC-1GRD/1HRD. It can cause fire, electric shock or unit damage.
5. Keep AC cord of power supply from being marred or crushed. If damaged, fire or electric shock could result.
6. Do not plug or unplug with wet hands. Electric shock could result.
7. Keep AC plug away from moisture or dust. Fire could result.
8. Do not use any power source other than specified. Fire or electric shock could result.
9. Do not put any forcible strength on the video monitor. Damage may result.
10. Make sure wires are connected properly before plugging in power supply.

### ⚠ CAUTION

1. Do not install or make any wire terminations while power supply is plugged in. It can cause electrical shock or damage to the unit.
2. Verify chime volume while handset is on the hook. Chime sound from KC-1GRD/1HRD speaker is loud, and may cause hearing damage.
3. Mount KC-1GRD/1HRD on wall in a convenient location, but not where it could be bumped or jarred.
4. In case of electrical storms, unplug power supply from AC outlet . It can cause fire, electric shock, or unit damage .
5. Do not install KC-1GRD/1HRD in any of the following locations, as it can cause fire, electric shock or unit damage:
   - High or extreme cold temperature area, under direct sunlight, near equipment that varies in temperature, in front of air conditioner, inside a refrigerated area, etc.
   - Places subject to moisture or humidity extremes (bathroom, cellar, greenhouse,etc.)
   - Places subject to environmental conditions, such as oil, dust, chemicals, salt, etc.
   - Places subject to constant vibration or impact.
   - Where noise generating devices such as TV or radio are close by.
   - Places subject to steam or smoke. (near heating equipment or cooking surfaces)

### ⚠ GENERAL PRECAUTIONS

1. KC-1GRD equipment, except for KC-DAR, is designed for indoor use only. Do not install outdoors.
2. KC-1GRD system is not operational during a power failure.
3. In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
4. Keep all DC wiring at least 1', (30cm) away from AC 100-240V wiring, fluorescent lighting, or dimmer switches. Otherwise, cross AC wiring at a 90° .
5. KC-1GRD system must be installed at least 3'3", (1m) away from TV or radio.

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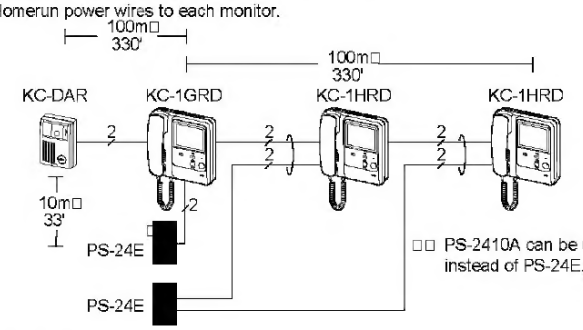
## WIRING

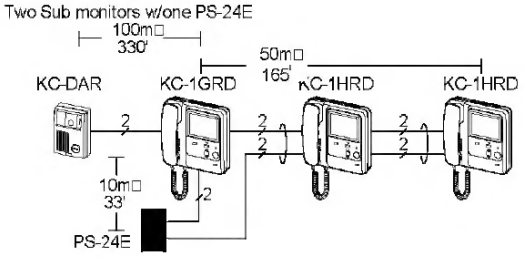
Max. wiring distance w/1.0mm dia. 18AWG cable

Two Sub monitors w/two PS-24E

Homerun power wires to each monitor.

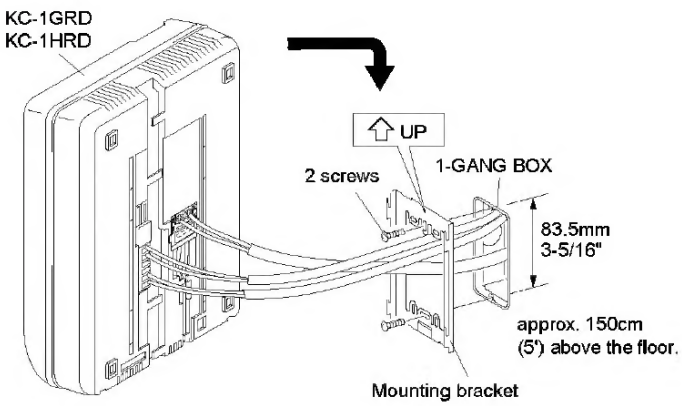



Two Sub monitors w/one PS-24E

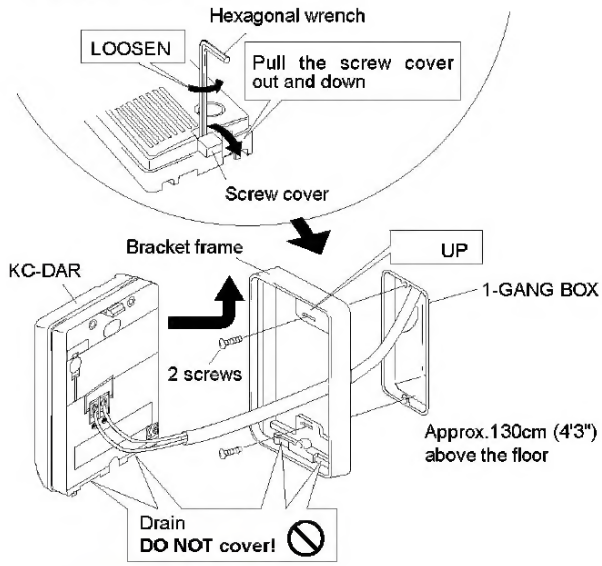



## MOUNTING

### Main/Sub monitor station



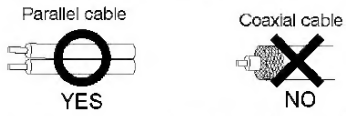

### Video door station




## Wiring Precautions

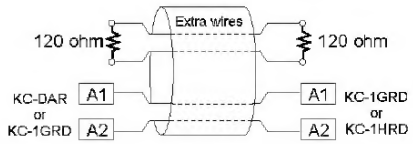
□ Keep all DC wiring at least 30cm, 20" away from AC 100~240V wiring, fluorescent lighting, or dimmer switches.
It may cause noise interference or malfunction.

□ Use a parallel conductor cable. Coaxial cable should not be used.

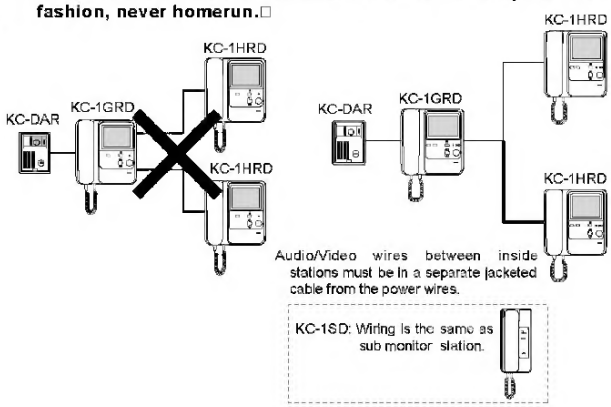



Vinyl jacketed, PE (polyethylene) insulation cable is recommended.

□ Extra pair(s) in the installed cable can affect image quality, and must be terminated with a 120 ohm resistor at each end.




**Main & sub monitor stations must be wired in a daisy-chained fashion, never homerun.□**

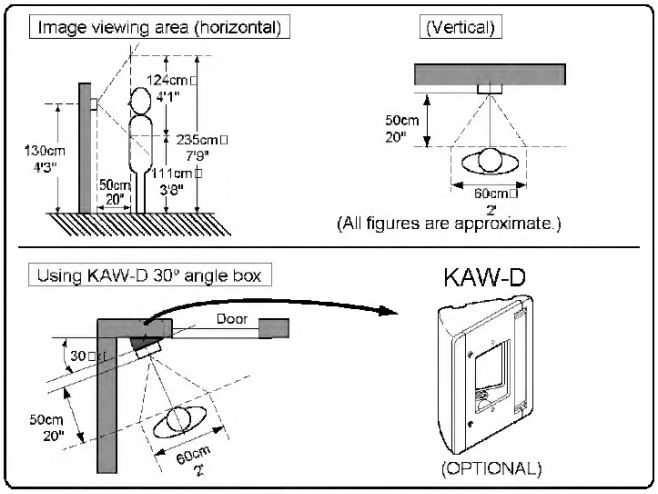



□□If proper cable is not used, system may malfunction.

## Mounting Precautions

□The video door station employs a CCD camera, and its performance may be affected by bright direct light, such as strong sunlight, gate light or street or porch light which is directed into the camera lens. Install the video door station in front of the visitor's position.

□ When outside temperature lowers sharply, after rain, etc., the inside of the camera may fog up slightly, causing a blurry picture, but this is not a malfunction. Normal operation will be restored when moisture evaporates.

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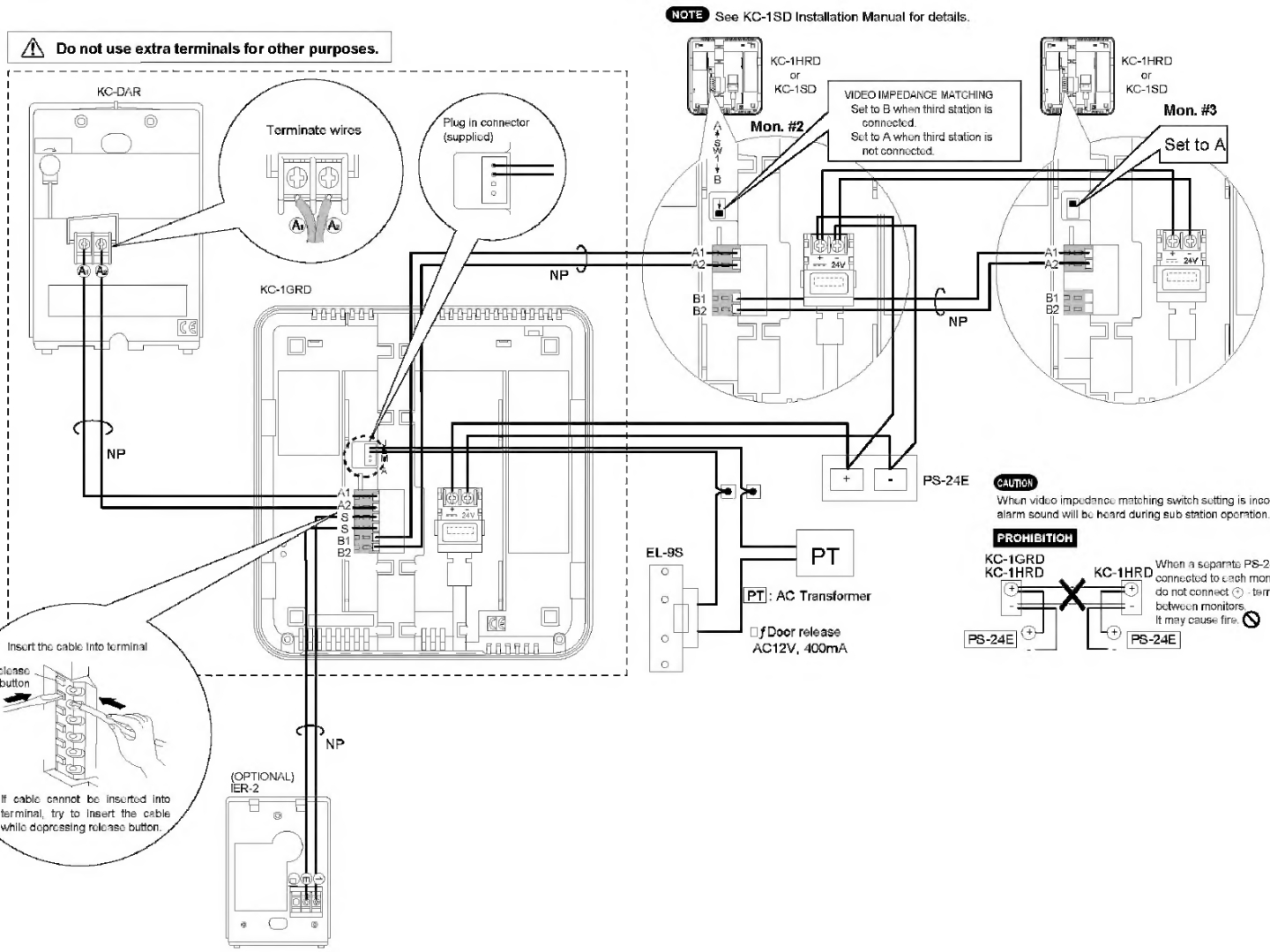
## WIRING


NOTE See KC-1SD Installation Manual for details.
Do not use extra terminals for other purposes.
KC-DAR
Terminate wires
Plug in connector (supplied)
KC-1GRD
NP
KC-1HRD or KC-1SD
Mon. #2
VIDEO IMPEDANCE MATCHING
Set to B when third station is connected.
Set to A when third station is not connected.
Mon. #3
Set to A
PS-24E
EL-9S
PT
PT : AC Transformer
Door release AC12V, 400mA
CAUTION
When video impedance matching switch setting is incorrect, alarm sound will be heard during sub station operation.
PROHIBITION
KC-1GRD
KC-1HRD
When a separate PS-24E is connected to each monitor, do not connect ⊖ terminals between monitors. It may cause fire.
Insert the cable into terminal
Release button
If cable cannot be inserted into terminal, try to insert the cable while depressing release button.
(OPTIONAL)
IER-2



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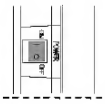
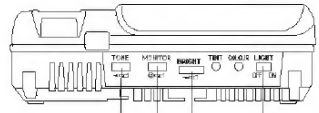
# BEFORE ASKING FOR REPAIRS

| Trouble | Potential cause of trouble | Solution |
|---|---|---|
| □ The system does not have chime tone when call button is pressed.<br>□ Cannot communicate with door station.<br>□ Image does not appear when the monitor button is pressed. | □Check the power supply. | □Turn on the Power switch.  |
| | □Make sure the system is being powered correctly. | □Check the power supply voltage. |
| | □Check the wiring between the door station and master station. | □Check if the cable is connected to the right terminals. (A1 to A1, A2 to A2) |
| □Hard to hear the call tone from door station. | □In some cases, environmental noise around the master station make the chime hard to hear. | Adjust tone volume. |
| □Can hear outside voice even though handset is not lifted. | □It is a normal operation. The system has a feature to monitor outside instantly when the call is pressed. | □Adjust monitor volume. Add chime extension speaker (IER-2) if necessary. |
| □The LCD monitor looks too dark or too bright. | □ It is normal operation because of characteristics of LCD panel. | □Adjust Bright control. |
| □ Hard to see the monitor when it gets dark outside.<br>□ White light sometimes turns on at the door station. | □ Appropriate lighting conditions are needed for a clear picture.<br>□ LED illuminators turn on automatically when it gets dark outside. | □Adjust the White Light illuminator to □OFF or ON as needed. |
| KC-1GRD BOTTOM VIEW   | | |
| □There is a white dot or a portion steadily lit on the monitor. | □It must be noted in advance that the TFT Color LCD panel, though manufactured with very high precision techniques, inevitably has a very small portion of picture elements that are either steadily lit or not lit at all, which is not considered a unit malfunction. | |

# SPECIFICATIONS

KC-1GRD/1HRD (Main/Sub monitor station)

| | |
|---|---|
| Power source | DC24V |
| Current | KC-1GRD Max. 700mA, 70mA standby<br>KC-1HRD Max. 500mA, 50mA standby |
| Call tone | From video door station 4-Tone chime Call-in LED blinks<br>Master station ⇄ Sub master station<br>□ Electronic pre-tone and voice from the other station.<br>All call button blinks. |
| Wiring Distance | KC-1GRD to the farthest KC-1HRD [18AWG 330', 1.0 mm 100m / 22AWG 165', 0.65mm 50m]<br>KC-1GRD to IER-2 Chime extension<br>KC-DAR to KC-1GRD |
| Communication | Simultaneous via handset |
| Video monitor | 4" TFT color LCD |
| Ambient temperature | 32°F -104°F (0° - 40°C) |
| Housing | Fire-retardant ABS plastic |
| Color | White |
| Dimensions | (H x W x D) 7-3/4" x 7-1/4" x 3-1/2", 195mm x 185mm x 88mm |
| Weight | 2.2lbs.(1kg) approx. |
| Door release | AC12V, 400mA |

KC-DAR (Video door station)

| | |
|---|---|
| Power source | DC12V in standby. DC22V in operation (supplied from KC-1GRD) |
| Current | 4mA approx. in standby, 350mA approx. max. |
| Picture element | 1/4" color CCD |
| Image viewing area | Appox. 2' Horiz., 3'8"~7'9" Vert. at 4'3" high (up to box center) and 20" away from camera. (60cm H, 111~235cm V at 130cm high & 50cm away) |
| Lighting at night | White LED illuminators cast up to 1' (30cm), in front of camera. □ƒBackground scene beyond cannot be seen. |
| Communication | Hands free |
| Ambient temperature | 14°F~140°F(10°C~60°C) |
| Housing | Fire-retardant ABS plastic. |
| Color | Gray |
| Dimensions | (H x W x D) 5-1/2" x 4-1/8" x 1-3/4", 140mm x 105mm x 44mm |
| Weight | 0.68 lbs. (310g) approx. |

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